

FeedScan Precision Feeding System aims to eliminate variability

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Thursday, October 21, 2010 10:02 AM CDT



World Dairy Expo 2010 featured a number of new innovations and technologies aimed at improving the quality of life for dairy cattle and farm profitability for producers.

Among the many new products available was the dg precisionFEEDING System manufactured by dinamica generale of Italy and distributed by Engineered Storage Products Company of DeKalb, Ill.

The system automatically adjusts rations for variations in dry matter and nutrients as it enters the tractor bucket.

A Near Infrared (NIR) analyzer, mounted in the payloader bucket, scans forages and grain to measure dry matter content, protein, starch, ADF, NDF, crude fat and ash. In seconds, the analyzer wirelessly communicates with a remote control mounted in the cab, allowing the producer to make adjustments to meet nutritionist recommendations.

"Technology is here to stay," said Dr. Noah Litherland, assistant professor of Dairy Cattle Nutrition, Research and Extension in the Department of Animal Science at the University of Minnesota. "We've got it in parlors, we've got robotic milking systems, and we've got automated calf feeders. Today's dairy farmers are interested in technology. They are data driven and want to use technology to help manage their animals."

Litherland noted that although advancements have been made in a variety of agricultural areas, animal nutrition has been "a little slower."

"Twenty years ago we started making TMRs and not a lot has changed since then," he said. "I think this is the next big thing."

Litherland and his team are currently conducting a trial at Gar-Lin Dairy Farms, a 1,600 cow operation located in Eyota, Minn., to compare the use of this system with conventional management.

"Our goal is to not just change but optimize milk production. We want to optimize milk quality, cow health, performance, maintain efficiency and control variation," he said.

"One of the challenges [producers] have is a pen full of animals with a lot of variability in differences in stages of lactation, body weight, dry for milk production in all kinds of different factors. But we need to try to find a way to economically bulk feed these animals to meet our requirements."

Litherland said the process for producers is rather simple. "You scoop up some forages - whether it's corn silage or high moisture corn or alfalfa silage - and push a button in the cab. The NIR reader reads it and it wirelessly communicates with a scale pad."

"[Basically] it communicates with the reader and makes the adjustment on the fly for how much corn silage you're supposed to have."

He cited that with the large feed bunkers found on many dairies today, comes great variation.

"We have huge bunkers on farms now. Huge bunkers of corn silage from several fields in different fields are quite variable and within field. We want to control that variability," he said.

Litherland's study compares weekly NIR readings with lab results derived from feed samples. He said they are testing the effect of adjustments on cow performance through consistency of dry matter, pen dry matter intake and individual cow milk production.

"[It's all about] consistency of nutrient delivery. Provide the diet as formulated. We've got the diet that's formulated on paper, the diet in the mixer and the diet the cow eats," Litherland said. "Any of those or all could be the same. This technology optimizes the cow's chance to meet her potential."

Engineered Storage Products Company officials priced the system which includes "DTM professional feed management software, an IRM (Intelligent